



Personal
Communications
Industry
Association

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95-157

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January 11, 1995

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FEDERAL COMMUNICATIONS COMMISSION

The Honorable Reed E. Hundt, Chairman
Federal Communications Commission
1919 N Street, N.W.; Room 814
Washington, D.C. 20554

Re: Amendment to the Commission's Rules Regarding a Plan
for Sharing the Costs of Microwave Relocation; WT
Docket No. 95-157, RM-8643

Dear Chairman Hundt:

The Personal Communications Industry Association ("PCIA") and numerous C block applicants (referred to jointly herein as the "Parties") are pleased to respond to the Federal Communication Commission's ("FCC" or "Commission") Notice of Proposed Rulemaking regarding microwave relocation.¹ The Parties strongly support the FCC's efforts to move expeditiously to address and resolve the important microwave relocation issues affecting the PCS industry. PCIA, as the trade association for various PCS providers, including many C block applicants, has played a central role in developing the consensus recommendations that have now been proposed by the FCC. The C block applicants, representing small businesses, rural telephone companies, businesses owned by minorities and women, and other entrepreneurial entities, seek to assist the FCC in expediting its proposals so that the deployment of PCS may commence. The Parties urge the Commission to adopt their recommendation to improve the relocation process by eliminating completely the voluntary negotiation periods for both safety and non-public safety entities.

ABUSE OF THE RULES BY MICROWAVE INCUMBENTS

The Parties are concerned about the current abuse of the FCC's voluntary transition rules by microwave incumbents. In its submissions to the Commission, PCIA described numerous instances in which microwave incumbents and their advisors were

¹Notice of Proposed Rulemaking, WT Docket No. 95-157 (Oct. 12, 1995).

misusing the rules to secure windfall profits.² The following examples were documented by PCIA and represent only a few of the actual extortionary demands encountered by PCS licensees during the negotiation process:

- In exchange for the 2 GHz frequencies, the Suffolk County Police Department requested not only a total digital microwave upgrade, including all enhancements, but also additional revenue of \$18 million "as an inducement to consummate this negotiation in a timely manner."³
- An equipment manufacturer quoted a relocation price of \$225,000 per link, including an equipment upgrade. The incumbent demanded \$400,000 in cash for each relocated link, which is more than 70% above the actual relocation cost. During the negotiation period, the incumbent attended a seminar on the "value" of these frequencies to PCS licensees. As a result, the incumbent rescinded its \$400,000 offer and demanded at the minimum, \$1,200,000 per link. Based on this figure, the relocation

²See Letter from Mark Golden of PCIA to Chairman Reed Hundt, RM-8643 (filed September 22, 1995)(containing examples of unreasonable demands by microwave incumbents). In addition, PCIA has discussed and sent materials on these issues to the Chairman, the Commissioners, and their staffs on numerous occasions. See, e. g., Letter from Jay Kitchen of PCIA to Chairman Reed Hundt (filed Apr. 4, 1995) (discussion difficulties with the microwave relocation process); Letter from Jay Kitchen of PCIA to Regina Keeney (filed May 25, 1995)(requesting that the Wireless Telecommunications Bureau take several actions to remove procedural uncertainties facing the PCS industry); Letter to Secretary William Caton regarding *Ex Parte* meeting of Jay Kitchen, Richard Wiley, and R. Michael Senkowski with Commissioner Ness and Mary McManus (filed July 6, 1995); Letter to Secretary William Caton regarding *Ex Parte* meeting of Jay Kitchen, Richard Wiley, and R. Michael Senkowski with Chairman Reed Hundt, Dan Phythyon, and Ruth Milkman (filed July 10, 1995).

³See Exhibit A.

costs for twelve links would be \$15,600,000. That figure is \$12,900,000 more than, or almost five times, the actual cost to relocate the links.

- An incumbent, a municipality, has engaged a law firm to negotiate microwave relocations with PCS licensees on the incumbent's behalf. Without regard to the underlying systems or the actual costs of relocation, the incumbent's negotiators demand \$1,000,000 per link.
- The incumbent, a governmental entity, has four analog links which the PCS licensee needs to relocate. The PCS licensee determined the cost of providing comparable systems to be \$760,000. The incumbent has stated that it would like a cash payment, and it will do the relocation on its own. The PCS licensee offered \$800,000 for the relocation of all four links; however, the incumbent twice refused to make a counter offer. Later, the incumbent informed the PCS licensee that it wanted \$1,000,000 for each relocated link (a total of \$4 million) and payment of its consulting fees of \$250,000.

These types of unreasonable demands are likely to become more outrageous as microwave incumbents continue to take advantage of the voluntary transition periods.

ELIMINATION OF THE VOLUNTARY NEGOTIATION PERIODS

To eradicate the egregious conduct by incumbents, the FCC should abolish the voluntary transition periods for both public safety and non-public safety licensees and require only a one-year mandatory negotiation period for all incumbents in the PCS spectrum. The FCC's rules are quite thorough and provide substantial protections to microwave incumbents in the absence of the voluntary transition periods. For instance, in order to relocate an incumbent, the rules require a PCS provider to:

- Guarantee payment of all costs of relocating to a comparable facility, including all engineering, equipment, and site costs and FCC fees, as well as any reasonable additional costs;

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- Complete all activities necessary for placing the new facilities into operation, including engineering and frequency coordination; and
- Build and test the new microwave (or alternative) system.

These and other safeguards fully protect all incumbent licensees from any disruption to their services from relocation. Consequently, the FCC should eliminate completely the voluntary negotiation periods. The mandatory one-year negotiation period provides ample time for the parties to complete their agreement.

HARM TO THE PUBLIC AND PRIVATE SECTORS

If the Commission allows the current relocation program to remain intact, the government, PCS providers, and consumers will all be harmed. Prompt action by the FCC will ensure that the vast benefits of PCS are not unduly delayed and that the expected dividends from PCS auctions and deployment are not diverted from the government and consumers to unscrupulous microwave incumbents.

Most importantly, the public would be denied new services and choices during the delays occasioned by the current and lengthy transition periods. The current process can take from five to seven years.⁴ During that time, important new offerings and capabilities are foreclosed from consumers.

The abuses currently plaguing the microwave relocation process will also aggravate the disparities in the deployment of PCS. The C block applicants have had to suffer through enormous delays from judicial stays, challenges to race-based federal programs, and most recently, the government shutdown. The incumbents' extortionary tactics, made possible through voluntary negotiations, will only further delay the deployment of PCS services and disadvantage future PCS licensees.

⁴See Attachment B.

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Additional factors unique to the C, D, E, and F block licensees suggest that these licensees will suffer even greater hardships as a result of the abuses. For instance, the smaller license areas (BTAs rather than MTAs) and smaller block size (10 MHz for D, E, and F licenses) will handicap future PCS providers. These smaller areas will make it more difficult to "engineer around" a microwave licensee who refuses reasonable offers for relocation. As the auction process continues, these small businesses will be faced with the choice of paying exorbitant relocation costs or delaying the deployment of services, both of which could result in severe financial crisis. These small businesses and entrepreneurs already lack the substantial financial resources characteristic of the A and B licensees. Outrageous relocation costs will simply exacerbate the financial disparity between the A and B licensees and the smaller C block entities. The FCC can avoid crippling new entrants by eliminating the voluntary negotiation periods.

Ultimately, if the FCC does not eliminate the voluntary negotiation periods, consumers will be the inevitable losers. A study on the cost of these delays by Professor Paul R. Milgrom of Stanford University conservatively estimated that abuses of the transition rules by microwave incumbents and their advisors are currently costing consumers nearly \$4 million per day.⁵ This study also predicts millions of dollars of additional losses from delays in the commencement of service on the C, D, E, and F blocks. The FCC can limit the harm to consumers by abolishing the voluntary negotiation periods.

As a final matter, elimination of the voluntary negotiation periods is also essential to preserving the value of spectrum. The uncertainty surrounding the cost and timing of relocating microwave incumbents will affect future spectrum auction revenues. The

⁵Letter to Chairman at Attachment C (Estimate of Losses to Government and Consumers Resulting from Microwave Relocation Rules by Professor Paul Milgrom, Stanford University).

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Milgrom study estimates, in fact, that such auction losses could amount to \$1.9 billion in foregone revenue for the U.S. Treasury.⁶

CONCLUSION

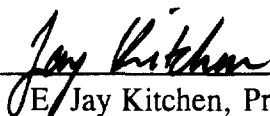
The Commission must act now to stop abusers of the existing relocation ground rules. The best way to eliminate the egregious conduct by incumbents is to eliminate the voluntary negotiation periods and require only a one-year mandatory negotiation period for all incumbents in the PCS spectrum. As long as incumbents are allowed a voluntary negotiation period, some unscrupulous incumbents will continue to seek windfalls and frustrate the deployment of PCS services. Elimination of the voluntary negotiation period will ensure that the FCC's rules succeed in their intended purpose: to ensure the prompt deployment of PCS while protecting microwave incumbents' rights to full cost compensation and a comparable system in alternative spectrum. The Parties respectfully

⁶*Id.*

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request that the Commission remain committed to ensuring the rapid deployment of PCS products and services and to preventing the loss of future auction revenue by eliminating the voluntary negotiation periods.

Respectfully submitted,

By: 
E. Jay Kitchen, President
PERSONAL COMMUNICATIONS
INDUSTRY ASSOCIATION
1019 19th Street, N.W.
Washington, D.C. 20036
(202) 467-4770

Paul Kimura, President
BRK Wireless Company, Inc.

Edward B. Ormsbee, General Manager
Cal-Ore Wireless

G.M. Hutton IV, Executive VP, Operations
Clarity Wireless Comm., Inc.

M.H. Mike Czerwinski, President
EATELCORP, Inc.

John A. Malloy, V.P. and General Counsel
GO Communications Corporation

Richard E. Kinder, V.P. Business Dev.
Indus, Inc.

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Eric Steinmann, Managing Partner
KEC Partnership

William Yu, Secretary
Longstreet Communications Int'l Inc.

Jerome A. Vigil, President
Loralen Corp.

Robert D. McLeod, President
Lubbock Radio Paging Services, Inc.

Christopher Mantle, Managing Partner
MAP Wireless, L.L.C.

Jeffery Smith, Vice President
Mountain Solutions

Frank Noverr, President
Noverr Publishing

George Schmitt, Executive V.P.
Ominipoint Corporation

Clayborne C. Curtis, President
Oreque, Inc.

Robert Martin, President
PCS Dev Co., Inc.

Rhonda G. McKenzie, Managing Partner
PCS Plus, L.L.C.

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Marshall W. Pagon, President
Pegasus Communications Portfolio Holdings

K. Philip Hwang
PerComm Serv, Inc.

Minki Kim, President
Point-to-Point Communications, Inc.

Mark R. Erickson, Jr., Operations Manager
Polycell Communications, Inc.

Darrell Maynard, President
Southeast Telephone

Arthur M. Isley, Jr. Manager
3 Rivers PCS, Inc.

Michael J. Tracy, Partner
Wireless Telecommunications Co.

cc: Commissioner James H. Quello
Commissioner Andrew C. Barrett
Commissioner Rachelle Chong
Commissioner Susan Ness
WT Docket No. 95-157



**SUFFOLK COUNTY
POLICE
DEPARTMENT**



TECHNICAL SERVICES SECTION

TELEFAX COVER SHEET

THE MESSAGE CONSISTS OF 0 SHEETS FOLLOWING THIS COVER.

IF YOU DO NOT RECEIVE THE MESSAGE OR IT IS RECEIVED POORLY
CONTACT THE SENDER BY VOICE AT (516) 852-6418

DIRECTED TO: Ms. Kathryn Drucker

FROM: D/I Gregory Curto

**RETURN TELEFAX AUTOMATIC ANSWER PHONE
(516) 852-6418**

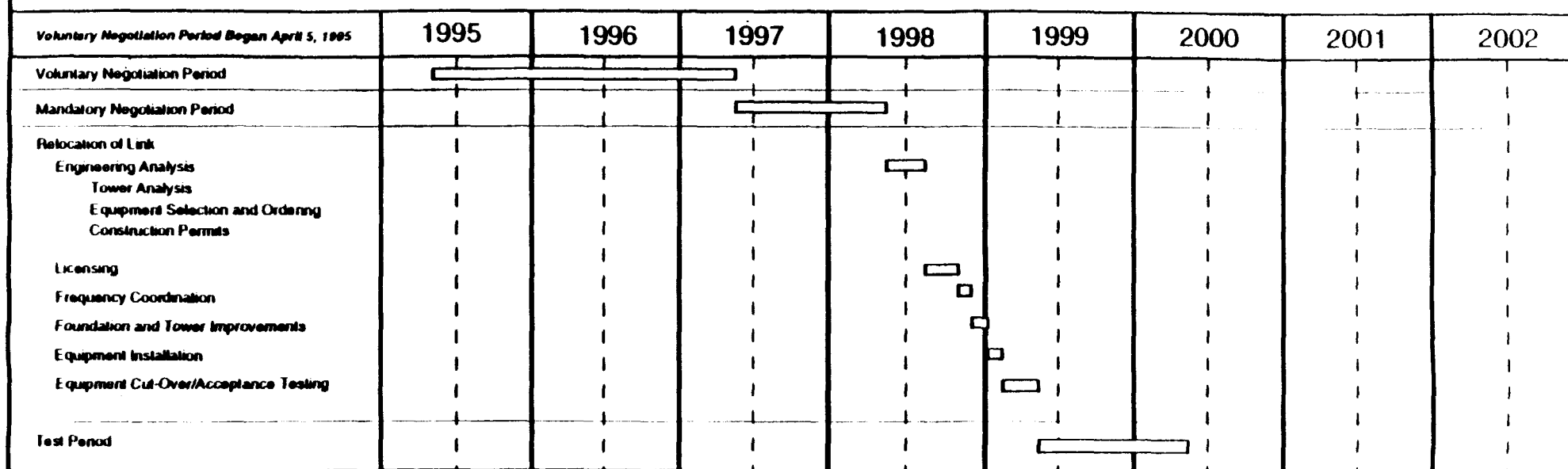
Ms. Drucker,

In exchange for the 2 GHz frequencies, Suffolk County requests a total digital microwave upgrade which includes all enhancements with all County Management Information Services requirements as indicated in the information FEDX'd to you on Thursday, Oct. 5 '95. An additional revenue of \$15 million must be included as an inducement to consummate this negotiation in a timely manner.

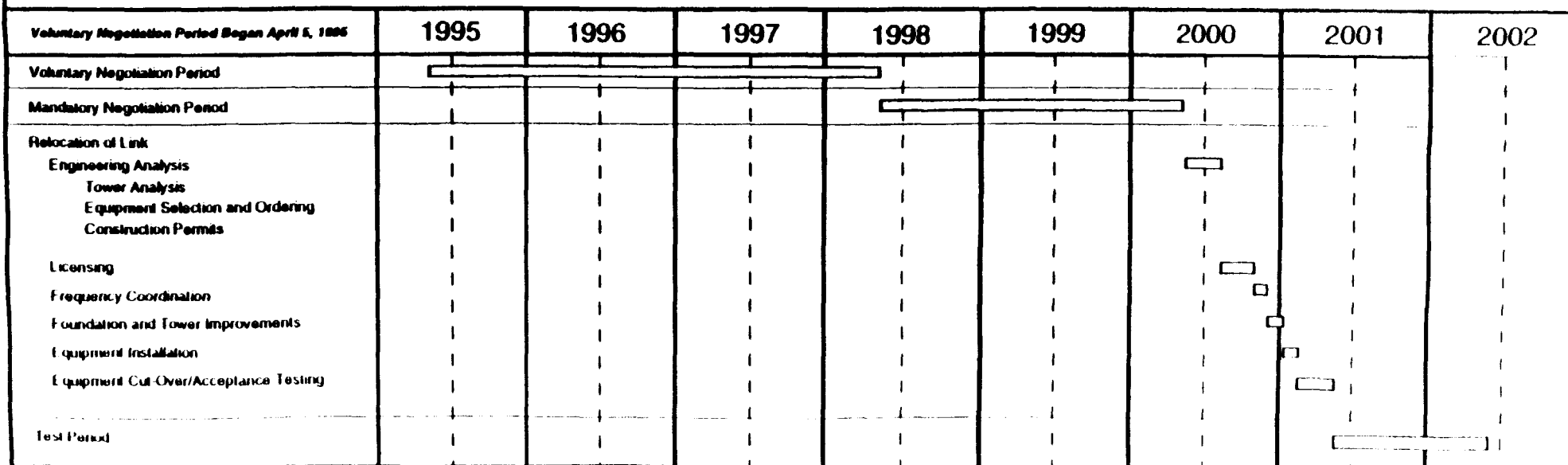
Sincerely,


D/Insp. Gregory Curto

Time Frame for Non-Public Safety Microwave Incumbent Relocation (A and B Block Spectrum)



Time Frame for Public Safety Microwave Incumbent Relocation (A and B Block Spectrum)



STANFORD UNIVERSITY
DEPARTMENT OF ECONOMICS
STANFORD, CALIFORNIA 94305-6072

Paul R. Milgrom
*Shirley and Leonard Ely, Jr. Professor
of Humanities and Sciences*

Phone: (415) 723-3397
Fax: (415) 725-5702

September 1, 1995

To Whom It May Concern:

I have been asked by Pacific Bell to estimate two kinds of losses that the government and consumers may suffer as a result of the current rules governing microwave relocation. The first is the loss of revenue to the Treasury in auctions for the C, D, E, and F-band PCS licenses resulting from the demands by microwave licensees for premium payments before relocating microwave links. Recent demands from microwave incumbents have called for payments of \$1 million per link, compared to an estimated actual relocation cost of \$200,000 for an average link. Such demands directly reduce the value of the PCS licenses to potential buyers. If recent demands are a fair indication of eventual settlements and if premium costs are shared equally among affected PCS providers, the loss of auction revenues would amount to \$1.9 billion. Smaller demands or compromise settlements could halve the cost to about \$900 million.

The second kind of loss is that suffered by consumers as a result of delays in initiating PCS services. The current rules encourage microwave users to utilize threats of delay to increase their bargaining power, since delays are costless to them but costly to the PCS providers. The loss in consumer surplus from delaying the introduction of PCS services on the A and B bands nationwide, conservatively estimated, amounts to \$55 million per month of delay, while the loss of delays in introducing services in the C band amounts to at least \$11 million per month. Under less conservative estimates, the costs could be several times higher than this.

Additional background for these calculations are provided in the attached statement.

Respectfully submitted,


Sincerely yours,

Statement of Paul R. Milgrom

1. My name is Paul R. Milgrom. I am the Shirley and Leonard Ely, Jr. Professor of Humanities and Sciences and Professor of Economics at Stanford University in Stanford, California, 94305.

2. I received an A.B. degree in Mathematics from the University of Michigan and an M.S. in Statistics and a Ph.D. in Business from Stanford University. My academic specialty is microeconomic theory and comparative economic institutions. From 1990-1994, I was coeditor of the *American Economic Review*. I have also served on the editorial boards of several other economics journals. I am the author of more than sixty books and articles and have been the recipient of numerous awards and honors, including Fellowships in the American Academy of Arts and Sciences and the Econometric Society. I have also received Fellowship grants from the John Simon Guggenheim Foundation, the Center for Advanced Study in the Behavioral Sciences, and the Center for Advanced Studies in Jerusalem. My curriculum vitae is attached.

3. I have devoted considerable time and attention to telecommunications issues, especially ones concerning Personal Communications Services (PCS). Since November of 1993, I have filed nine affidavits or statements with the Federal Communications Commission regarding PCS-related matters, including two that were co-authored with my colleague, Stanford Professor Robert Wilson. I acted as an adviser to Pacific Telesis Mobile Services during the recently completed auction #4 of broadband PCS licenses. In 1994, I filed an affidavit in connection with the motion to terminate the MFJ. In 1984, when the MFJ precipitated a restructuring of certain contracts between AT&T and the Southern New England Telephone Company (SNET), I advised SNET about the renegotiation of its contracts.

4. My other experience with regulatory matters is diverse. It includes testimony given to the Federal Energy Regulatory Commission concerning pricing on the Trans-Alaska pipeline, testimony at trial concerning the economics of the insurance contracting, and written testimony concerning environmental regulation filed with the National Oceanographic and Atmospheric Administration (NOAA).

5. I have been asked by Pacific Telesis Mobile Services (PTMS), the high bidder in auction #4 for the B-band licenses covering the Los Angeles and San Francisco MTAs, to comment on the likely costs to consumers and the government resulting from bargaining with microwave licensees whose operations would suffer interference from PCS operations. These costs include reductions in future government auction revenues and probably also include reductions in consumer surplus resulting from delays in the introduction of PCS services

6. Any such calculations necessarily rest on a forecast of the outcome of bargaining between the PCS providers and the microwave licensees. Data about PCS providers willingness to pay and bargaining postures are confidential and unavailable, so I have had to rely on information about the microwave providers initial demands. A second estimation issue arises from the fact that most existing microwave links are vulnerable to interference from more than one PCS frequency. In those situations, my estimate of the revenue impact on future auctions will depend on how the costs of relocating microwave links will be apportioned among the interfering operations. For these calculations, I have assumed that where multiple services would interfere with a link, any payments to microwave licensees are shared equally among interfering service providers.

Summary

7. In my opinion, the losses associated with any delay in beginning PCS services caused by negotiations between point to point microwave users and PCS licensees would be very large. The financial demands of microwave users reduce the attractiveness of PCS licenses yet to be auctioned. If the recent demands made by microwave licensees are representative of bargaining outcomes, losses in government auction revenues from sales of the C, D, E, and F-bands as a result of payments to microwave users would total between \$930 million and \$1.9 billion. Delays in delivering PCS service as a result of protracted bargaining are likewise costly. I measure these costs in terms of the loss of consumer surplus resulting in a one-month delay in the service initiation for all licenses in the A and B bands or in the C band. Using the most conservative estimation procedure, losses in consumer surplus accrue at a rate of \$55 million per month of delay for the A and B-band services, and \$11 million per month for the C-band service. Less conservative, but

rather more likely estimation scenarios entail losses many times higher: \$225 million per month of delay for the A and B-bands and \$35 million per month for the C-band.

Bargaining with Point to Point Microwave Users

8. PCS service rules provide that licensees must relocate microwave links with which their services interfere. There are about 4,500 such links in the U.S., affecting all six PCS bands, of which some 3227 affect the C, D, E and F bands. The rules provide commercial microwave users a 2-year voluntary relocation period followed by a 1-year mandatory relocation period. For public service entities there is a 3-year voluntary period followed by a 2-year mandatory period. Many microwave users are now requesting payments of between \$400,000 and \$800,000 per link above and beyond the provision of comparable facilities to move before the mandatory deadline.

9. The sequential and multilateral nature of these negotiations makes it likely that bargaining will lead to a large amount of lost value for PCS licensees. Fearing that the first settlements will set a precedent for later ones, PCS providers are likely to resist initial demands for extra compensation, while microwave licensees have little or nothing to lose by delaying their relocation. Initial bargaining is therefore likely to be difficult, making costly delays probable.

10. If the rules governing microwave relocation allow the incumbents to extract premiums, bidders for the C, D, E, and F-bands will factor those premiums into their business plans as a cost of initiating service. For example, a company that expects to have to pay premium costs of \$400,000 per link for 100 links to initiate service in some BTA will subtract the \$40,000,000 in premium payments in calculating the value of the license. Its maximum price would be correspondingly reduced. Since it is the maximum price of the bidder with the second highest value that determines the auction price, the net result would be a \$40,000,000 reduction in the price for this individual license. Assuming that the microwave licensee negotiates a premium payment of \$400,000 to \$800,000 per link in addition to the direct relocation costs and that the premium cost for each link is shared equally among the PCS licensees whose services would interfere, and recognizing that 3,227 links interfere with the C, D, E, and F-bands nationwide, I expect that the

total auction prices of the licenses in the C, D, E and F bands would be reduced by \$930 million to \$1.9 billion.¹

Consumer Surplus Computations²

11. The largest cost of any delay in instituting PCS services would be borne by consumers in the wireless industry, for whom access to PCS services would be delayed and who would pay higher prices for cellular services due to the absence of PCS competition. Estimates of the loss of consumer surplus per month from delayed entry depend on assumptions about the nature of competition and the effectiveness of regulation in the industry, as well as on forecasts of demand. However, even the most rough-and-ready estimates show that the cost is very large. Currently, cellular service is provided by what is essentially a duopoly. If the introduction of the PCS A and B-band competitors into the wireless services market led to price reductions of just 10% with no consequent expansion in demand it would still increase consumer surplus by an amount equal to 10% of the existing industry revenues. As of the summer of 1994, annualized industry revenues amounted to approximately \$6.5 billion,³ leading to an estimated gain for consumers of \$650 million per year. Similarly, if entry of the C-band provider led to price reduction of 2%, the estimated gain for consumers would be \$130 million per year.

12. The preceding estimates, however, are probably too low. Because even conservative assumptions about demand can lead to very large estimates of the loss of consumer surplus from delayed entry, I have constructed my estimates using conservative assumptions about demand. First, despite the persistent growth of demand recently experienced and forecast by almost every pundit, I assume that the scale of the wireless market is fixed at the level attained in the summer of 1994. Second, despite estimates which show that demand for wireless services has tended to be quite

¹This calculation uses information supplied by Pacific Bell Mobile Services about which particular PCS bands would interfere with each particular microwave links.

²These calculations incorporate and extend the ones in my statement to the FCC of May, 1995.

³*The Wireless Communications Industry*, Donaldson, Lufkin & Jenrette, Winter 1994-1995.

inelastic, I assume that wireless service demand has unitary elasticity, which is the average elasticity for all products in the economy.⁴ Third, in order to focus on the beneficial effects of competition for consumers, I assume that there is an absence of regulation that either raises or depresses prices. Finally, I assume that the parties have equal costs and engage in Cournot competition, which is a moderate and widely used specification of the intensity of competition among wireless providers.

13. With these assumptions, the eventual effect on consumer surplus of increasing the number of competitors in a market from two to four – the entry of the PCS A and B-band licensees – would be a fifty percent (50%) increase in the volume of wireless calling, a thirty three percent (33%) reduction in the prices of wireless services, and an increase in consumer surplus of approximately \$2.7 billion per year. The entry of a fifth competitor, the C-band licensee, would increase volume by an additional seven percent (7%) and lower prices by an additional six percent (6%) leading to an increase in consumer surplus of approximately of \$420 million per year. Delaying the day when these new entries occur amounts to delaying the time at which consumers first begin enjoying this enormous benefit.

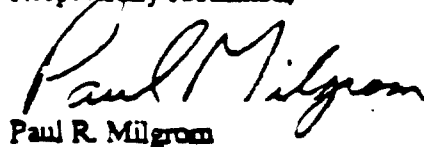
14. The preceding calculation has assumed that the market adjusts immediately to the entry of new competitors and that the size of the market at the time of entry is the same as its current size. More realistically, we would expect a delayed adjustment and a growing market. If, as expected, the rate of growth in the relevant future period exceeds the real rate of interest, then accounting for both of these effects would further increase the consumer surplus estimates.

15. It is most likely that, if the rules remain unchanged, both of the kinds of costs described in this memorandum will be incurred. There will certainly be a loss of auction revenue to the

⁴In an affidavit to the Commission dated September 14, 1994, Professor Jerry Hausman estimated the price-elasticity of demand to be -0.402 with a standard error of .155. As the customer base for wireless services expands, demand may become more elastic. Since more elastic demand leads to lower estimates of the additional consumer surplus from increased competition, I have used such an estimate here.

government amounting to hundreds of millions, or perhaps billions of dollars. In addition, there will probably be a loss of consumer surplus amounting to hundreds of millions of dollars.

Respectfully submitted,

A handwritten signature in cursive script that reads "Paul Milgrom". The signature is written in dark ink and is positioned above the printed name.

Paul R. Milgrom